

CLAIMS

What is claimed is:

1. A mount assembly for use with a vehicle having a frame and a vehicle body, said mount assembly comprising:

5 a support structure having an aperture and adapted to be mounted to the frame of the vehicle;

a carrier adapted to be mounted to the vehicle body and at least partially disposed within said aperture with said support structure being displaceable relative to said carrier along a line of travel when the frame moves relative to the vehicle body; and

10 an insulator disposed between said support structure and said carrier for coupling said carrier to said support structure;

said insulator having a first portion defining a first resistance for isolating said displacement of said support structure during an application of a first force along said line of travel in a first direction which at least partially compresses said first portion, and a
15 second portion defining a second resistance with said second resistance being greater than said first resistance for isolating and translating said displacement of said support structure after said application of said first force and during an application of a second force along said line of travel in said first direction wherein said second force is greater than said first force such that both of said first and second portions are at least partially compressed.

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2. The assembly as set forth in claim 1 wherein said first portion is at least partially compressed before said second portion is at least partially compressed.

3. The assembly as set forth in claim 1 wherein said first and second portions of said
25 insulator are formed of the same material.

4. The assembly as set forth in claim 1 wherein said first and second portions of said insulator are formed of a common homogeneous material.

5. The assembly as set forth in claim 4 wherein said common homogeneous material is further defined as micro-cellular polyurethane.

5 6. The assembly as set forth in claim 1 wherein said first portion of said insulator has a first maximum width and said second portion of said insulator has a second maximum width which is larger than said first maximum width to define a ledge on said second portion extending outwardly beyond said width of said first portion.

10 7. The assembly as set forth in claim 6 wherein said first portion has a first height and said second portion has a second height smaller than said first height.

8. The assembly as set forth in claim 7 wherein said first height is 3 times larger than said second height.

15 9. The assembly as set forth in claim 1 wherein said first portion has an annular configuration defining a first circumference.

20 10. The assembly as set forth in claim 9 wherein said second portion has an annular configuration defining a second circumference which is larger than said first circumference to define an annular ledge on said second portion extending outwardly beyond said circumference of said first portion.

25 11. The assembly as set forth in claim 10 wherein said first portion and said second portion having said annular ledge are formed of a common homogeneous material.

12. The assembly as set forth in claim 6 wherein said carrier defines a cup at least partially surrounding said first portion and compressing said first portion without compressing said ledge and said second portion when said first force is applied.

13. The assembly as set forth in claim 12 wherein said cup includes a flange extending outwardly therefrom for engaging and compressing against said ledge during said application of said second force.

5 14. The assembly as set forth in claim 13 wherein said cup further includes an inner wall extending through said aperture to a distal end.

15. The assembly as set forth in claim 14 wherein said inner wall of said cup at least partially extends through said aperture.

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16. The assembly as set forth in claim 15 further including a plate mounted to said distal end of said inner wall.

15 17. The assembly as set forth in claim 16 further including a fastener interconnecting said plate to said inner wall such that said plate and said carrier move as a single unit.

18. The assembly as set forth in claim 16 further including a second insulator for further coupling said carrier to said support structure and for further isolating said displacement of said carrier when said first and second forces are applied along said line of travel.

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19. The assembly as set forth in claim 18 wherein said second insulator is disposed between said support structure and said plate.

20. An insulator for a mount assembly of a vehicle having a frame and a vehicle body wherein the mount assembly includes a support structure mounted to the frame and a carrier mounted to the vehicle body with the support structure being displaceable relative to the carrier along a line of travel when the frame moves relative to the vehicle body and
5 said insulator disposed between the support structure and the carrier for coupling the carrier to the support structure, said insulator comprising:

a first portion defining a first resistance for isolating the displacement of the support structure during an application of a first force along the line of travel in a first direction which at least partially compresses said first portion; and
10 a second portion defining a second resistance with said second resistance being greater than said first resistance for isolating and translating the displacement of the support structure after the application of the first force and during an application of a second force along the line of travel in the first direction wherein the second force is greater than the first force such that both of said first and second portions are at least partially compressed.

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21. The insulator as set forth in claim 20 wherein said first portion is at least partially compressed before said second portion is at least partially compressed.

22. The insulator as set forth in claim 20 wherein said first and second portions are
20 formed of the same material.

23. The insulator as set forth in claim 20 wherein said first and second portions are formed of a common homogeneous material.

24. The insulator as set forth in claim 23 wherein said common homogeneous
25 material is further defined as micro-cellular polyurethane.

25. The insulator as set forth in claim 20 wherein said first portion has a first maximum width and said second portion has a second maximum width which is larger than

said first maximum width to define a ledge on said second portion extending outwardly beyond said width of said first portion.

26. The insulator as set forth in claim 25 wherein said first portion has a first height
5 and said second portion has a second height smaller than said first height.

27. The insulator as set forth in claim 26 wherein said first height is 3 times larger than said second height.

10 28. The insulator as set forth in claim 20 wherein said first portion has an annular configuration defining a first circumference.

29. The insulator as set forth in claim 28 wherein said second portion has an annular configuration defining a second circumference which is larger than said first circumference
15 to define an annular ledge on said second portion extending outwardly beyond said circumference of said first portion.

30. The insulator as set forth in claim 29 wherein said first portion and said second portion having said annular ledge are formed of a common homogeneous material.